

Methods: In the time interval from 1998 to 2007, 357 patients with a diagnosis of in-situ or invasive breast cancer underwent surgical treatment at two medical centers in Tehran (known as AZAR sample). According to patient's clinical characteristics, tumor features and the patient's preference they were assigned to either breast conserving therapy or modified radical mastectomy groups. Tumor size per se was not a strict criterion for selection of surgical therapy; so breast conserving surgery was performed in selected patients with tumors larger, than 5 cm or stage III_A disease. Surgical team and technique, neo/adjuvant treatment plans and follow-up protocols were similar for all patients.

Results: Overall 204 (57%) and 153 (43%) patients underwent modified radical mastectomy (MRM) and breast conserving Surgery (BCS) respectively. 31 patients (8.75%) developed disease recurrence, namely 5 cases of locoregional (16%) and 26 cases of distant metastasis (84%). Clinical stage was the most important predicting factor for local recurrence, followed by tumor size ($P = 0.0001$), and premenopausal state.

Clinical stage and degree of lymph node involvement were important predictors of distant metastasis. There was no statistically significant difference in recurrence between BCS and MRM groups in similar clinical stages.

Conclusion: Locoregional and systemic recurrence is associated with a significant decrease in overall and disease free survival among patients with invasive breast cancer. Tumor size, clinical stage, lymph node involvement and premenopausal state are closely related to the risk of recurrence. However, there seems no significant difference in the rate of recurrence, disease-free or overall survival in patients undergoing BCS or MRM. Moreover breast conserving therapy could be considered as a safe and effective treatment for selected patients with T3 tumors or stage III_A disease.

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Poster

Laparoscopic oophorectomy: should it be considered in pre-menopausal women requiring aromatase inhibitors?

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Introduction: For the last few years the role of aromatase inhibitors (AI's) in pre-menopausal women has been an area of interest to both surgeons and oncologists. In the past some women have been treated with AI's based on the absence of menses even though hormonal profiles may suggest otherwise. In these cases this had led to the resumption of their menstrual cycle. This problem has been the main drive to employ different methods to suppress the ovaries by either temporary or permanent means. At our breast care centre we have performed bilateral salpingo-oophorectomy on this specific group of women for the purpose of re-commencing AI's. The aim of this study was to review the outcome of treatment in this patient group.

Methods: All women who underwent surgery between June 2003 and November 2009 were identified from a prospectively maintained data base. They were all pre-menopausal women with ER positive cancer initially commenced on AI's leading to the resumption of menses. Patients with a pre-operative hormonal profile were identified.

Results: A total of 42 women underwent surgery during the six years. Their median age was 45 years (range 33-57). Tumours were mainly invasive ductal carcinoma grade 2 to 3 with 15 patients found to have nodal involvement. Histological assessment of the ovaries revealed one case of primary ovarian malignancy and three cases of secondary metastatic deposits. For those with hormone profiles LH and FSH were not accurate predictors of menopausal status indicating that women were post menopausal when high levels oestradiol suggested otherwise. All women were able to commence treatment with AI. Only one patient required overnight stay for a haematoma, two developed wound infections and one suffered from severe menopausal symptoms for one month, for which she required no further treatment.

Conclusion: This study demonstrates that there is an increasing role for laparoscopic oophorectomy in pre menopausal women being considered for AI's and should be considered. Also when assessing menopausal status then oestradiol should be included.

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Poster

Early complications of mastectomy

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Background: Early complications of breast cancer surgery contribute to a worse experience for patients and may delay adjuvant treatment. We wished to determine predictive factors for complications and prolonged stay after mastectomy.

Method: We reviewed 178 patients aged 29 to 89 (median 62) who underwent mastectomy from April 07 to August 08 under three surgeons.

Haemoglobin concentration was measured preoperatively and on the first postoperative day as an indicator of peri/postoperative blood loss. Day one drain output was used as a marker of postoperative blood loss. Univariable and multivariable analysis with linear and logistic regression were undertaken using a number of possible explanatory variables. Hospital stay, wound complications and seroma formation were used as outcome measures.

Results: Both peri-operative and post-operative haemorrhage were significant predictors of prolonged in patient stay ($p < 0.0006$). The table shows factors associated significantly with blood loss.

Peri-operative blood loss	Post operative blood loss
Simultaneous reconstruction ($r = 0.314$, $p < 0.0001$)	Simultaneous reconstruction ($r = 0.603$, $p < 0.0001$)
Length of surgery ($r = 0.275$, $p = 0.0002$)	Length of surgery ($r = 0.564$, $p < 0.0001$)
Pre-op Temp < 35.5 ($r = -0.146$, $p = 0.0398$)	Pre-op Temp < 35.5 ($r = -0.221$, $p = 0.0018$)
Post-op Temp < 35.5 ($r = -0.152$, $p = 0.0325$)	Post-op Temp < 35.5 ($r = -0.215$, $p = 0.0024$)
Surgicel ($r = 0.292$, $p < 0.0001$)	Area of breast tissue excised ($r = 0.151$, $p = 0.034$)
Blade dissection ($r = 0.385$, $p < 0.0001$)	Pre op MAP ($r = 0.182$, $p = 0.0102$)
	Post op MAP ($r = 0.166$, $p = 0.0193$)

Multivariable analysis also demonstrated smoking as a significant predictor of post-operative blood loss ($p < 0.02$).

In addition to blood loss, other significant factors leading to prolonged in patient stay included diabetes ($p = 0.0276$), age > 62 ($p = 0.001$) and ASA 3 or 4 ($p < 0.0001$).

Significant predictors of wound complications included diabetes ($p = 0.03$) and pre-op heart rate ($p = 0.01$). Low pre-operative temperature was inversely related ($p = 0.04$).

Conclusions: Blood loss was associated with a longer hospital stay. This study identified a number of factors contributing to blood loss including blade dissection, length of surgery, area of tissue excised, simultaneous reconstruction, pre and post operative MAP and smoking. This audit has led to a change in practice from blade dissection to diathermy. Diabetes and pre-op heart rate (HR) were associated with an increase risk of wound complications, with HR being highly significant.

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Poster

Endoscopy-assisted breast surgery for breast cancer: a comparison with conventional breast conserving surgery

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Background: Endoscopy-assisted breast surgery (EABS) has been used successfully for plastic surgery aesthetic procedures such as breast augmentation, breast disease, and even malignant diseases of the breast without reducing the therapeutic effects. EABS can be performed with small and remote incisions that are inconspicuous after surgery. We report herein the aesthetic and treatment results of EABS in patients with breast cancer compared to conventional breast-conserving surgery (BCS).

Materials and Methods: To improve the cosmetic outcome, EABS, which can be performed through minimal axillary, periareolar semicircular, or both, incisions, was undertaken. A 3-cm axillary skin incision was made along the axillary skin crease; the work space was created with a wound retractor. After the retromammary space was dissected through the axillary incision, we made a periareolar incision to excise tissues, partially or totally, under endoscopic assistance. We also performed a dye- or radioisotope-guided sentinel lymph node biopsy and dissected axillary lymph nodes (level I and II) under endoscopic assistance, and carried out frozen section biopsies to assess tumor invasion at the resection margins. In 13 cases that were to undergo BCS, volume replacement with absorbable 910 polyglactin mesh was placed into the defect to minimize the breast deformity after endoscopy-assisted BCS. The following information was obtained: patients' clinical and histopathological characteristics, operative procedures, surgical outcomes, cosmetic evaluation, and patient satisfaction.

Results: We retrospectively analyzed 50 consecutive patients with breast cancer that underwent EABS between June 2006 and November 2008. Thirty three underwent EABS, and 17 had conventional BCS. There was no significant difference in patient characteristics, tumor characteristics, operation time, or blood tests between patients undergoing EABS